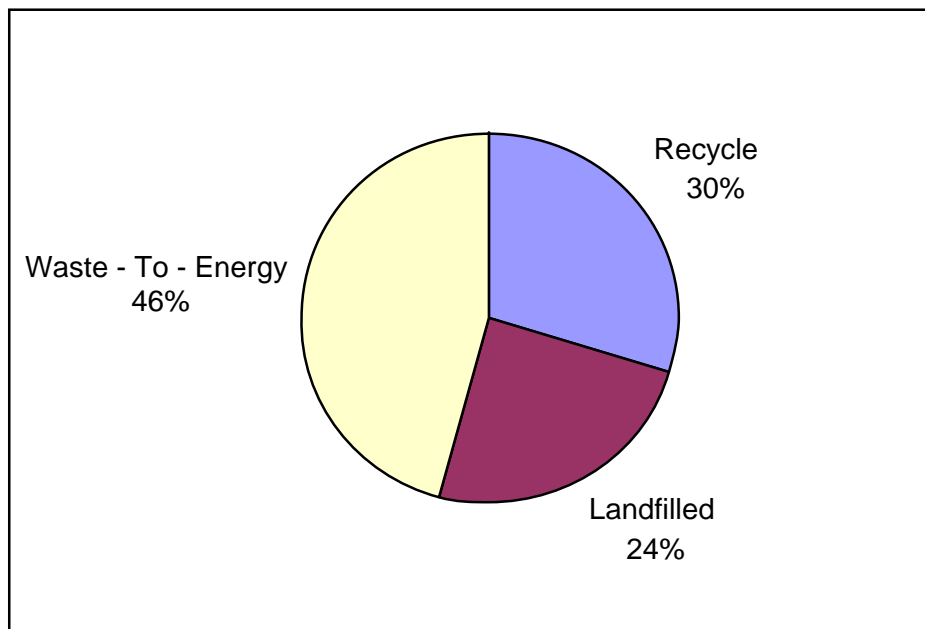


# 2003 Municipally Submitted Solid Waste Management Data

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Maine municipalities are required, through 38 MRSA § 2133, to report their efforts and programs related to municipal solid waste management annually to the State Planning Office. Municipalities provide detail on the tonnage of solid wastes they have overseen and a description of the various solid waste management practices utilized. The pie chart below illustrates the three major solid waste management practices, by percent of the total, as reported by Maine communities and regions. It is important to note that the tonnage reported by municipalities to the State Planning Office may not include the entire tonnage of municipal solid waste generated within their municipality. Municipalities may not always assist in the actual management of the waste stream generated by businesses located within their borders.

## Municipal solid waste management provided by Maine's communities in 2003.



*Note: the municipal solid waste (MSW) tonnage shown by this pie chart does not reflect the total tonnage of municipal solid waste generated within Maine in 2003. The tonnages used in this chart are: Recycling - 336,448.70 tons; Landfilling - 276,040.43 tons; and, MSW delivered to Waste-To-Energy facilities - 519,378.34 tons*

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This tabulation and analysis of the State of Maine's 2003 municipal solid waste and recycling data was prepared by the State Planning Office's Waste Management and Recycling Program. Additional information on municipal residential solid waste and recycling may be obtained from the Maine State Planning Office, State House Station # 38, Augusta, Maine 04333 Phone: 207-287-1489, or by visiting our website at [www.recyclemaine.com](http://www.recyclemaine.com).



# Summary & Findings

## 2003 Solid Waste and Recycling Data Submitted by Maine Communities

- ☒ 245 individual municipalities and 52 regions (containing another 288 municipalities) provided their annual solid waste and recycling report to the State Planning Office, representing 99% of Maine's population.
- ☒ Municipal solid waste managed by communities, that was either landfilled or delivered to Waste-to-Energy (W-T-E) facilities, equaled 561,469.97 tons in 1998; 576,087 tons in 1999; 535,708 tons in 2000; 535,530 tons in 2001; 552,026.63 tons in 2002; and **560,970.68 tons in 2003**.
- ☒ Residential recycling was 90,356.50 tons in 1998; 92,128 tons in 1999; 88,978 tons in 2000; 91,812 tons in 2001; 92,407.74 tons in 2002; and **98,547.15 tons in 2003**.
- ☒ Actual municipal bulky waste recycled was 192,315.86 tons in 1998; 115,604 tons in 1999; 140,984 tons in 2000; and 136,838 tons in 2001, 95,485.58 tons in 2002; and **168,310.94 tons in 2003**. (Bulky waste recycling tonnage was lower in 2002 because for that year wood chips burned for energy production were not counted as recycling).
- ☒ Actual bulky waste landfilled or delivered to Waste-To-Energy facilities was 72,362.63 tons in 1998; 123,617 tons in 1999; 131,263 tons in 2000; 89,299 tons in 2001, 196,496.48 tons in 2002; and **126,802.29 tons in 2003**.
- ☒ Total municipal solid waste tonnage managed by municipalities in 2003 was 1,131,867.47 tons.

## Definitions

**Bulky Wastes** – these are solid wastes that do not typically fit into a 30 gallon trash container, and may include such items as wood, large metal appliances and construction materials.

**Commercial Wastes - these** are solid wastes typically generated by businesses and commercial activity and may include such items as corrugated cardboard, office papers, plastics, food waste and other types of products.

**Municipal Solid Waste (MSW)** - solid waste emanating from household and normal commercial activities.

**Residential waste** – solid waste generated as a result of normal domestic activities.

**Waste – To – Energy – (W-T-E)** - facilities where MSW is delivered, and through incineration, energy is recovered and converted into electricity

## *Summary of Recyclables & Disposal Methods Reported by Municipalities*

**Table I**

<b>Recycled</b>	<b>Tons</b>
Residential	98,547.15
Commercial	69,590.61
Bulky	<u>168,310.94</u>
<b>Sub-Total:</b>	<b>336,448.70</b>
<b>Disposed</b>	
Residential (W-T-E)	394,789.76
Residential (Landfilled)	166,180.92
Commercial (W-T-E)	107,622.17
Bulky Waste (Landfilled)	109,859.51
Bulky Waste (W-T-E)	<u>16,966.41</u>
<b>Sub-Total:</b>	<b>795,418.77</b>

## *Summary by Residential, Commercial and Bulky Categories*

The following table illustrates how these three categories of waste were managed by municipalities in 2003:

**Table II**

<b>Residential</b>	<b>Tons</b>
Recycled	98,547.15
Landfilled	166,180.92
Waste-To-Energy	<u>394,789.76</u>
<b>Sub-Total:</b>	<b>659,517.75</b>
<b>Commercial</b>	
Recycled	69,590.61
Waste-To-Energy	<u>107,622.17</u>
<b>Sub-Total:</b>	<b>177,212.78</b>
<b>Bulky Wastes</b>	
Recycled	68,310.94
Waste-To-Energy	16,966.41
Landfilled	<u>109,835.88</u>
<b>Sub-Total:</b>	<b>295,113.23</b>
<b>Total of Solid Waste Managed</b>	<b>1,131,867.47 tons</b>

## ***Average ‘Per Person’ Solid Waste Generation Rates***

**(Based Upon Maine’s 2000 Census and Municipally Reported Data)**

**Table III**

	<b><u>2000</u></b> Tons Per Person	<b><u>2001</u></b> Tons Per Person	<b><u>2002</u></b> Tons Per Person	<b><u>2003</u></b> Tons Per Person
<b>Residential MSW</b>	.4287	.4264	.4389	.4423
<b>Residential Recyclables</b>	.0712	.0731	.0733	.0775
<b>Bulky Waste</b>	.1041	.0711	.1559	.1002
<b>Bulky Waste Recycled</b>	<u>.1141</u>	<u>.1089</u>	.0756	<u>.1330</u>
<b>Total ‘per person’</b>	.7181	.6795	.7437	.7530

(data submitted through the annual municipal solid waste reports show that for the communities that include commercial waste in their reports, that the average ‘per person’ waste generation rate increases by .2054 tons, as opposed to communities who do not report commercial wastes in their reports.)

## ***‘Costs Per Person’ Calculations***

The costs per person calculations, which reflect the municipal costs of providing solid waste services to residents, (and in some cases, businesses), are presented in Table V. The calculation is made by dividing the total municipal expenses by the state’s 2000 US Census population.

**Table IV**

<b><u>Reporting Year</u></b>	<b><u>Dollars Per Person</u></b>
2000	\$52.45
2001	\$59.61
2002	\$60.58
2003	\$64.04

# Overview of Recycling Efforts

Each year, Maine's communities are required to report details and tonnage of their solid waste management programs, including trash disposal, recycling and composting efforts and materials, to the Maine State Planning Office, Waste Management & Recycling Program. For the 2003 calendar year, 251 municipalities (representing 75 % of Maine's population) reported their individual Municipal Solid Waste (MSW) tonnage and data. In addition, 52 regional associations (representing 24.07 % of Maine's population) reported for 288 communities, plantations and unorganized townships. In 2003, a total of 1,266,499 citizens were included in the municipal reports, representing over 99 % of the state's population.

The table below summarizes the total of each of the three categories:

## *Recycled Materials by Residential, Bulky and Commercial Categories*

**Table V**

Residential Materials Recycled:	98,493.87 tons
Bulky Materials Recycled:	168,310.94 tons
Materials Recycled by Businesses: { as reported by municipalities }	69,590.61 tons
<b>Total:</b>	<b>336,448.70 tons</b>

## *Residential Materials Recycled*

The major categories of residentially generated recyclables and corresponding tonnage as reported by Maine communities are summarized below:

**Table VI**

Office Papers	1,634.35 tons
Corrugated Cardboard	31,365.63 tons
Newspapers	27,823.03 tons
Magazines	1,360.83 tons
Mixed Papers	9,455.48 tons
Total of Glass Recycled	3,534.11 tons
Total of Plastic Recycled	2,333.17 tons
Metal recovered from Incinerators	6,893.18 tons
Tin/steel cans	2,558.03 tons
Aluminum cans and products	237.66 tons
Other types of Products	3,820.83 tons
Food Waste composted	1,103.67 tons

Other types of compost	1,486.98 tons
Reuse activity	4,637.82 tons
Universal Waste (also Mercury Products)	302.38 tons
<b>Total of municipal recycling efforts:</b>	<b>98,547.15 tons</b>

### ***Bulky Wastes Recycled***

The major categories of bulky recyclables reported to the State Planning Office include metals, yard waste, tires, construction and demolition debris, wood, appliances and mixed waste. Maine municipalities reported a total of **168,310.94** tons of bulky waste that was recycled and is shown in the following table:

**Table VII**

White goods and other metals	48,496.13 tons
Leaf and Yard Waste	26,303.05 tons
Tires (chipped or reused)	4,073.63 tons
Construction/Demolition debris	12,731.77 tons
Tree and Brush Wood	15,674.20 tons
Wood (processed for fuel)	61,030.36 tons
Other bulky wastes	1.80 tons
<b>Total bulky waste recycling:</b>	<b>168,310.94 tons</b>

### ***Commercial Recycling***

Fifty-four towns/regions reported off-site commercial recycling. The major categories of recyclables and corresponding tonnage for those materials that were recycled by businesses and reported by the community are summarized below:

**Table VIII**

Wood (pallets, etc.)	3,204.51
Corrugated Cardboard	26,306.81
Paper (all other grades)	6,225.84
Plastics	1,395.75
Metals	8,183.86
Non-bulky wastes	14,044.33
Bulky wastes	229.51
<b>Total Commercial Recycling</b>	<b>69,590.61 tons</b>

*{Not all reporting communities included commercial recycling efforts conducted 'off-site' in their recycling figures.}*

### ***Community Recycling Rates***

The following table shows the number of communities and total population for each of various recycling rate ranges. The recycling rate is a mathematical calculation that reflects the tonnage of recyclables divided by the total tons of municipal solid waste generated within a community, plus a credit of 5% for the recycling done through the bottle bill and a credit of up to 10% for various composting efforts.

**Table IX**

<b>Recycling Rate</b>	<b>Number of Municipalities</b>	<b>Total Population</b>	<b>% of State Population</b>
5 - 20.9%	156	184,537	14.47%
21 - 34.8%	139	280,791	21.94%
35.5 - 40.7%	83	246,727	19.35%
41 - 44.9%	43	100,058	7.85%
45 - 49.6%	48	149,161	11.70 %
50% and over	62	289,397	22.7 %

### ***2003 Recycling Centers Activities***

Many municipalities in Maine work cooperatively with other municipalities for the processing of their recyclables. Some municipalities work with the private sector for those services. The following is a partial list of regional recycling centers:

**Table X**

<b>Facility/ Community</b>	<b>Tons Recycled</b>	<b>#Towns/ Regions</b>	<b>Population Count</b>	<b>%Maine Population</b>
Bangor - Pubic	5,879.27	29	105,489	8.27%
Coastal - Public	457.78	6	7,433	0.58%
Dexter - Public	1,235.00	3	11,253	0.88%
EMR - Private	1,022.86	4	4,993	0.39%
Howland -Public	175.60	4	3,112	0.24%
Jay -Public	1,132.49	6	13,182	0.95%
Ireland - Private	247.31	6	4,789	0.38%
Kennebec Valley - Public	272.70	5	4,917	0.39%
Kennebunk - Public	2,287.90	3	16,693	1.31%
Ken-a-Set – Non-profit	990.08	4	28,281	2.22%
Lewiston - Public	5,329.08	8	82,908	6.5%
Lincoln County – Public	4,059.68	10	41,192	3.23%
Oxford County – Public	2,727.52	16	25,442	2.07%
Pine Tree - Private	3,105.59	6	15,446	1.21%
Pittsfield - Public	1,359.79	9	15,841	1.24%
Regional Waste – Public	18,524.14	24	227,197	17.82%
Sandy River – Non-profit	2,231.72	14	26,657	2.09%
Unity - Public	434.74	9	8,551	0.67%

### ***Commercial Recycling Efforts Detail***

The following lists the Maine municipalities and regions whose reports to the State Planning Office included a total of **69,590.61 tons** of ‘off-site’ processed commercial recyclables tonnage:

**Table XI**

<b>Municipality or Region</b>	<b>Commercial Tons</b>	<b>Residential Tons</b>	<b>Adjusted Rate</b>
Arundel	4.6	215.97	45.8 %
Auburn	2,075.0	1,049.30	26.6 %
Bangor	10,519.07	1,970.61	40.6 %
Biddeford	5,242.48	1,157.22	48.3 %
Brewer	174.00	446.75	23.9 %
Brunswick	2,074.5	1,543.4	42.8 %
Central Penobscot	17.23	151.74	15.9 %
Clinton Region	105.93	620.04	28.9 %
Detroit	11.3	32.16	15.2 %
Eastport	10.00	33.03	16.2 %
Farmington	2,207.36	632.36	47.0 %
Gorham	301.62	832.63	28.7 %
Hatch Hill Region	10,566.14	661.00	44.7 %
Hebron	1.43	50.57	33.2 %
Holden	115.34	106.98	32.5 %
Jackman Region	15.6	61.08	37.4 %
Jay	167.29	513.71	54.2 %
Lewiston	2,427.26	2,916.58	39.9 %
Lincoln	941.48	211.3	36.1 %
Littleton	25.55	170.32	45.0 %
Mid-Maine Solid Waste	315	1,175.92	47.5 %
Millinocket	263.00	809.89	51.2 %
Nobleboro Region	636.10	1,252.56	45.6 %
North Oxford Region	787.6	1,303.89	50.4 %
Northern Aroostook Region	3,836.6	750.72	48.5 %
Northern Katahdin Region	70.00	182.67	33.5 %
Norway-Paris	4.00	1,019.76	38.0 %
Old Town	2,850.55	518.89	54.2 %
Oxford	1,076.87	457.9	36.4 %
Palmyra	128.46	88.75	34.9 %
Pittsfield	554.79	1,018.14	72.3 %
Poland	731.51	361.96	47.5 %
Presque Isle Region	5,427.02	1,671.81	59.2 %
Skowhegan	1,920.14	587.63	52.4 %
Tri-Community	1,219.00	1,145.98	39.3 %
Waterboro	307.00	620.47	36.0 %
Wells	12,344.51	1,516.61	77.6 %
Winslow	345.00	173.18	25.4 %
Winthrop	1,218.75	620.90	45.3 %
Yarmouth	619.00	852.93	75.5 %

## **Municipal Solid Waste Disposal Methods**



## *Landfilling*

184,979.61 tons of municipally managed MSW were landfilled in 2003:

**Table XII**

<b>Landfill Name (and location)</b>	<b>Tons Landfilled</b>	<b>% of Total Landfilled</b>	<b>% of Maine's Population Served</b>
Bath Landfill	20,044	10.84 %	1.74 %
Crossroads Landfill (Norridgewock)	42,042.53	22.73 %	7.00 %
Brunswick Landfill	14,016	7.58 %	1.66 %
Green River (New Brunswick)	11,422.3	6.17 %	1.12 %
Hatch Hill Landfill (Augusta)	32,940	17.81 %	3.00 %
Little Squaw (Greenville)	807	0.43 %	.01 %
North Country (Bethlehem, NH)	9,669.14	5.23 %	1.00 %
Presque Isle Landfill	10,463	5.66 %	1.15 %
Southwest (New Brunswick)	8,200.51	4.43 %	1.32 %
Tri-Community (Fort Fairfield)	18,779.49	10.15 %	3.00 %
Turnkey (Rochester, NH)	15,876.89	8.58 %	3.12 %
West Forks	718.75	0.39 %	.01 %
<b>Sub-total:</b>	<b>184,979.61 tons</b>		<b>24.13%</b>

## *Waste – To – Energy Facilities*

397,273.82 tons of Maine generated, municipality managed MSW were delivered to these WTE facilities in 2003. Municipally collected/managed solid waste accounted for 66% of the total waste and commercially generated solid waste accounted for 34% of the MSW delivered to these facilities:

**Table XIII**

<b>Waste-To-Energy Facility</b>	<b>Tons Combusted</b>	<b>% of Total</b>	<b>% of Maine's Population Served</b>
Maine Energy (Biddeford)	90,075.67	22.67 %	14.45 %
Mid Maine Waste Action Corp. (Auburn)	53,732.06	13.52 %	10.85 %
Penobscot Energy Recovery Corp. (Orrington)	177,758.42	44.74 %	25 %
Regional Waste Systems (Portland)	75,707.67	19.05 %	18.74 %
<b>Sub-total:</b>	<b>397,273.82</b>		<b>72.34 %</b>

## *Bulky Waste Disposal*

**126,802.29** tons of bulky waste, managed through municipal programs, was disposed of in 2003, as shown in the following table:

**Table XV**

<b>Material</b>	<b>Delivered to W-T-E (Tons)</b>	<b>Landfilled Tons</b>	<b>Total Tons</b>
Yard waste	29.50	34.10	63.6
Tires	0	0	0
Construction/Demo	1,582.25	49,043.4	50,602.02
Wood/brush	13,135.45	2,024.54	15,159.99
Appliances	79.12	508.5	587.62
Mixed Wastes	2,140.09	58,225.34	60,038.96
<b>Total</b>	<b>16,966.41</b>	<b>109,835.88</b>	<b>126,802.29</b>

## **2003 Municipal Solid Waste Management Program Facts**

### **Expenses**

Solid waste and recycling expenses for the 300 reporting municipalities/regions were over 81 million dollars.

### **Commercially Generated Solid Waste**

170 municipalities and regions that include 358 municipalities, (44% of Maine's population) collected and included commercial waste tonnages and recyclables in their reported MSW.

Of the reports submitted to the State Planning Office, businesses are required to pay for their solid waste disposal services in 164 municipalities and regions that include another 277 municipalities, (74% of Maine's population).

### **Municipal Trash Collection & Payment Scenarios**

In 14 municipalities, (13% of Maine's population) municipal employees collect residential trash curbside.

In 114 municipalities and regions that include 147 municipalities, (39% of Maine's population) hire private haulers to collect residential trash curbside.

70 municipalities and regions, encompassing a total of 137 municipalities, (25% of Maine's population) have a Pay-As-You-Throw ('PAYT') program, where residents pay individually for solid waste related services.

In 209 municipalities and regions that include 431 municipalities, (66% of Maine's population), residents have the option of taking their trash to the municipality's transfer station or may contract

with a private hauler for that service, an option in at least 68 municipalities and regions, including 158 municipalities, (25% of Maine's population).

### **Mandatory Recycling**

78 municipalities and regions that include 157 municipalities (26% of reporting communities), have mandatory recycling ordinances for their residents.

### **Municipal Bans**

165 municipalities and regions that representing 324 municipalities (63% of Maine's population) have a variety of municipal bans on what may be included in MSW intended for disposal.

## ***Recycling Rates & Trends 1993 to 2003*** **may be found at [www.recyclemaine.com](http://www.recyclemaine.com)**

Individual municipal and regional recycling rates and trends, reflecting municipally submitted solid waste program information, from 1993 to 2003 are presented on our website **[www.recyclemaine.com](http://www.recyclemaine.com)**.

### **2003 Data Reports include the following:**

- Bans by Municipalities
- Bulky Waste Incinerated
- Bulky Waste Landfilled
- Bulky Recycling
- Bulky Metal Recycled
- Bulky Waste and Recycling Per Person
- Commercial Waste and Recycling
- Curbside Trash Collection
- Glass Recycled
- Household Hazardous Waste Collection
- Disposal Sites
- Municipal Expenses
- Municipality Pays for Commercial MSW
- Mandatory Recycling
- Metal Recycled
- Municipal Recycling Summary
- Municipal Trash Summary
- Recycling Rates
- Ordinances
- Paper Recycled
- Pay As You Throw
- Per Person: Dollars
- Per Person: Recyclables
- Per Person: Trash
- Recycling Centers
- 'Trash Haulers in Community' Summary
- Universal Waste

**Trend data and graphs from 1993 to 2003 for the following subjects are available:**

**Municipal Solid Waste**

Incinerated at Waste-To-Energy facilities and landfilled municipal waste  
Incinerated at Waste-To-Energy facilities and landfilled bulky waste

**Commercial Solid Waste**

Landfilled, delivered to Waste-To-Energy, and recycled

**Recycled**

Total recycled materials  
Municipal recycled materials  
Paper categories recycled  
Plastic materials recycled  
Metal categories recycled  
Total glass recycled  
Bulky material recycled

**Talking Trash & Recycling, 1998-2003, The Big Picture and Trends**

**Incinerator Talk, 1998-2003, The Big Picture and Trends**